

This document gives pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a **Minor, Industrial** permit. The discharge results from the operation of a potable water treatment plant. This permit action consists of updating the proposed effluent limits to reflect the Virginia WQS (effective 2/1/2010) and updating permit language, as applicable. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards of 9VAC25-260-00 et seq.

1. Facility Name and Mailing Address: Beacon Hill WTP
Loudoun Water
P.O. Box 4000
Ashburn, VA 20146
SIC Code: 4941 WTP
Facility Location: 17132 Winning Colors Place
Leesburg, VA 20175
County: Loudoun
Facility Contact Name: Les Morefield
Telephone Number: 703-401-8764
2. Permit No.: VA0090573
Expiration Date: 2/12/2011
Other VPDES Permits: None
Other Permits: VDH Public Water Supply (PWSID No. 6107037)
E2/E3/E4 Status: N/A
3. Owner Name: Loudoun Water
Owner Contact / Title: Dale Hammes, General Manager
Telephone Number: 571-291-7700
4. Application Complete Date:
Permit Drafted By: Anna Westernik
Date Drafted: 11/16/2010
Draft Permit Reviewed By: Alison Thompson
Date Reviewed: 11/19/2010
Draft Permit Reviewed By: Bryant Thomas
Date Reviewed: 12/3/2010
Public Comment Period: Start Date: 1/27/2011
End Date: 2/25/2011
5. Receiving Waters Information:
Receiving Stream Name: Limestone Branch, UT
Stream Code: 1aXLY
Drainage Area at Outfall: 0.15 square miles
River Mile: 0.63
Stream Basin: Potomac River
Subbasin: Potomac River
Section: 9
Stream Class: III
Special Standards: None
Waterbody ID: VAN-A03R
7Q10 Low Flow: 0.0 MGD
7Q10 High Flow: 0.0 MGD
1Q10 Low Flow: 0.0 MGD
1Q10 High Flow: 0.0 MGD
Harmonic Mean Flow: 0.0 MGD
30Q5 Flow: 0.0 MGD
303(d) Listed: No
30Q10 Flow: 0.0 MGD
TMDL Approved: Yes, Downstream
Date TMDL Approved: 7/6/2004
6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

<input checked="" type="checkbox"/> State Water Control Law <input checked="" type="checkbox"/> Clean Water Act <input checked="" type="checkbox"/> VPDES Permit Regulation <input checked="" type="checkbox"/> EPA NPDES Regulation	<input type="checkbox"/> EPA Guidelines <input checked="" type="checkbox"/> Water Quality Standards <input type="checkbox"/> Other
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7. Licensed Operator Requirements: None
8. Reliability Class: N/A

9. Permit Characterization:

<input type="checkbox"/> Private	<input type="checkbox"/> Effluent Limited	<input type="checkbox"/> Possible Interstate Effect
<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Water Quality Limited	<input type="checkbox"/> Compliance Schedule Required
<input type="checkbox"/> State	<input type="checkbox"/> Toxics Monitoring Program Required	<input type="checkbox"/> Interim Limits in Permit
<input type="checkbox"/> POTW	<input type="checkbox"/> Pretreatment Program Required	<input type="checkbox"/> Interim Limits in Other Document
<input checked="" type="checkbox"/> TMDL		

10. Wastewater Sources and Treatment Description:

Loudoun Water operates a 34,000 gpd water filtration plant that serves approximately 96 residences at the Beacon Hill Subdivision. Two manganese greensand filters provide iron and manganese removal for the drinking water supply derived from two remote wells. Both potassium permanganate and sodium hypochlorite are injected in the water prior to the filter units. An estimated chlorine dosage of 2.0 mg/L is injected into the water supply prior to the filters to assure a 1.0 mg/L concentration in the filter effluent. The filters are backwashed approximately every one to two weeks, prior to headloss through the filter reaching 10 psi.

The backwash water is discharged to a baffled settling tank designed for one year of iron and manganese solids storage. Prior to discharge to the settling tank the backwash water is dechlorinated by traveling over sulfur dioxide tablets placed on a screen at the entrance to the settling tank.

Sump pumps in the settling tank transfer the decanted wastewater to Outfall 001. Outfall 001 discharges to a pond and subsequently, an unnamed tributary of Limestone Branch.

See **Attachment 1** for the NPDES Permit Rating Worksheet.

See **Attachment 2** for a facility schematic/diagram.

TABLE 1 OUTFALL DESCRIPTION				
Outfall Number	Discharge Sources	Treatment	Max 30-day Flow	Latitude / Longitude
001	Industrial Wastewater	See Item 10 above.	0.008 MGD	N 39° 08' 25" W 77° 35' 15"
See Attachment 3 for a copy of the Waterford topographic map (DEQ Topo #215A).				

11. Solids Treatment and Disposal Methods:

Loudoun Water removes the solids from the settling tank on a yearly basis. The solids are transported to the Blue Plains interceptor line located on the Loudoun County Parkway for disposal.

12. Individual VPDES Permits, Discharges, Intakes, and Monitoring Stations in Vicinity of Discharge

TABLE 2	
Latitude/Longitude	Description
N 39° 09' 50" W 77° 33' 3.4"	Raspberry Falls WRF – Permitted municipal discharge to Limestone Branch, UT (VA0088196)
N 39° 08' 05" W 77° 34' 04"	North Spring Behavioral Health Care WWTP -- Permitted municipal discharge to Limestone Branch, UT (VA0067938)
N 39° 08' 32" W 77° 25' 23"	Beacon Hill WTP VPDES -- Permitted industrial discharge to Limestone Branch, UT (VA0090573)
39° 12' 35" 77° 31' 56"	Lucketts Elementary WWTP VPDES Permitted municipal discharge to Limestone Branch, UT (VA0021750)
39° 12' 50.3" 77° 32' 11.1"	Hiway Trailer Park STP VPDES Permitted municipal discharge to Limestone Branch, UT (VA0074942)
N 39° 10' 4" W 77° 32' 13"	DEQ Ambient Monitoring Station on Limestone Branch (1aLIM001.16)
N 39° 10' 12" W 77° 31' 48"	USGS Gaging Station on Limestone Branch, UT #1 at Route 661 near Leesburg, VA (USGS #01643600)
39° 06' 55" 77° 30' 15"	Town of Leesburg WTP Raw Water Intake

- 13. Material Storage:** All chemicals are stored in the process control room. One of the floor drains is sealed. The other floor drain is used to discharge the excess water from the turbidity in line meter. Secondary containment is present for all stored chemicals.

TABLE 3 MATERIAL STORAGE	
Materials Description	Volume Stored
Sodium Hypochlorite	2 55-Gallon Drums
Potassium Permanganate	1 5-Gallon Bucket
Sodium Bisulfite Liquid	1 55-Gallon Drum

- 14. Site Inspection:** Performed by Sharon Mack Allen on July 17, 2007 (see **Attachment 4**, Technical Inspection Summary Report).

15. Receiving Stream Water Quality and Water Quality Standards:a. Ambient Water Quality Data

The Department of Environmental Quality has no monitoring data for the receiving stream, an unnamed tributary to Limestone Branch. The nearest downstream DEQ ambient monitoring station is 1aXGJ000.42, located approximately 4.0 miles downstream of Outfall 001 on another unnamed tributary to Limestone Branch. Station 1aXGJ000.42 is an assessment unit that begins at the boundary of the Section 9 Public Water Supply area designation and continues downstream to Limestone Branch. There is insufficient data from this monitoring station to determine use support for the recreational use (see **Attachment 5**, Planning Statement).

Limestone Branch, downstream of this discharge, is listed as impaired for not meeting the recreational use goal due to *E. coli* excursions from the maximum *E. coli* bacteria criterion at DEQ ambient monitoring stations 1aLIM001.16 at Route 15 and DEQ ambient monitoring station 1aLIM001.80 at Selma Lane. The impaired segment spans from approximately 0.05 miles upstream from the Route 15 Bridge to the confluence with the Potomac River. A bacteria Total Maximum Daily Load (TMDL) for Limestone Branch was approved by EPA on July 6, 2004. Since the Beacon Hill WTP is an industrial discharge, it is staff's best professional opinion that it does not significantly contribute to the bacterial load to the receiving stream.

b. Receiving Stream Water Quality Criteria

Part IX of 9 VAC 25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream, Limestone Branch, UT, is located within Section 9 of the Potomac River Basin, and is as Class III water.

At all times, Class III waters must achieve a dissolved oxygen (D.O.) of 4.0 mg/L or greater, a daily average D.O. of 5.0 mg/L or greater, a temperature that does not exceed 32°C, and maintain a pH of 6.0-9.0 standard units (S.U.).

The Water Quality Criteria for some metals are dependent on the receiving stream's hardness (expressed as mg/L calcium carbonate). The 7Q10 of the receiving stream is zero and no ambient data is available. Therefore, hardness data obtained from monitoring the drinking water system after all treatment on September 3 and September 23, 2008 will be used to determine hardness. The hardness values obtained from these sampling events were 200 mg/L and 160 mg/L. An hardness value of 180 mg/L, obtained from averaging these two results, will be used to determine metals criteria.

Attachment 6 details water quality criteria applicable to the receiving stream.

c. Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9 VAC 25-260-360, 370 and 380 designates the river basins, sections, classes, and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, Limestone Branch, UT, is located within Section 9 of the Potomac River Basin. This section has not been designated with a special standard.

d. Threatened or Endangered Species

The Virginia DGIF Fish and Wildlife Information System Database was searched on October 20, 2010 for records to determine if there are threatened or endangered species in the vicinity of the discharge. The following threatened and endangered species were identified within a 2 mile radius of the discharge: the Wood Turtle, the Upland Sandpiper, the Loggerhead Shrike, Henslow's Sparrow, the Bald Eagle, the Green Floater, and the Migrant Loggerhead Shrike. The limits proposed in this draft permit are protective of the Virginia Water Quality Standards and therefore, protect the threatened and endangered species found near the discharge.

16. Antidegradation (9VAC25-260-30):

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream has been classified as Tier 1 based on an evaluation of the critical stream flows. The critical stream flows for this tributary are 0.00 MGD. At times, the stream is comprised entirely of effluent. It is staff's best professional opinion that the instream waste concentration is 100% during critical stream flows, and the water quality of the stream will mirror the quality of the effluent. Permit limits proposed have been established by determining wasteload allocations that will result in attaining and/or maintaining all water quality criteria applicable to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

17. Effluent Screening, Wasteload Allocation, and Effluent Limitation Development:

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points are equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLAs) are calculated. In this case since the critical flows 7Q10 and 1Q10 have been determined to be zero, the WLAs are equal to the WQS. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency and statistical characteristics of the effluent data.

a. Effluent Screening

Review of groundwater data collected in September 2008 shows that fluoride, chloride, sulfate, barium, magnesium, sodium, potassium, bromodichloromethane, chloroform, dibromochloromethane, copper, lead, and zinc were found to be present above the quantifiable level.

Two additional copper samples conducted at Outfall 001 in November 2008 show that copper was below the detection limit of 5.0 µg/L.

b. Mixing Zones and Wasteload Allocations (WLAs)

Wasteload Allocations (WLAs) are calculated for those parameters in the effluent with the reasonable potential to cause an exceedance of water quality criteria. The basic calculation for establishing a WLA is the steady state complete mix equation:

$$WLA = \frac{C_o [Q_e + (f)(Q_s)] - [(C_s)(f)(Q_s)]}{Q_e}$$

Where: WLA = Wasteload allocation
 C_o = In-stream water quality criteria
 Q_e = Design flow
 Q_s = Critical receiving stream flow
 (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; harmonic mean for carcinogen-human health criteria; 30Q10 for ammonia criteria; and 30Q5 for non-carcinogen human health criteria)
 f = Decimal fraction of critical flow
 C_s = Mean background concentration of parameter in the receiving stream.

The water segment receiving the discharge via Outfall 001 is considered to have a 7Q10 and 1Q10 of 0.0 MGD. As such, there is no mixing zone and the WLA is equal to the C_o .

Staff derived wasteload allocations where parameters are reasonably expected to be present in an effluent (e.g., total residual chlorine where chlorine is used as a means of disinfection) and where effluent data indicate the pollutant is present in the discharge above quantifiable levels. With regard to the Outfall 001 discharge, total residual chlorine may be present since chlorine is used for disinfection of the drinking water supply, and Part 17.a of this fact sheet lists other parameters found to be present above quantifiable levels.

c. Effluent Limitations, Outfall 001 – Toxic Pollutants

9VAC25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Those parameters with WLAs that are near effluent concentrations are evaluated for limits.

The VPDES Permit Regulation at 9VAC25-31-230.D. requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges. Since the discharge is intermittent, only acute WLAs are needed to protect the receiving stream.

The State Water Control Boards adopted the *General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Potable Water Treatment Plants* (9 VAC 25-860) in December, 2008. As no federal effluent guidelines currently exist for discharges from water treatments plants, the monitoring requirements and limitations in the general permit are based on best professional judgment and the water quality standards in 9 VAC 25-260 as amended. The effluent limits established in this permit reflect those in the general permit and are based on the water quality standards and best professional judgment.

1) Total Residual Chlorine (TRC):

Chlorine is used for disinfection at the water treatment plant and is potentially present in the discharge. The permit limits of 0.011 mg/L monthly average and 0.001 mg/L maximum found in this permit reissuance were derived from the General Permit for Potable Water Treatment Plants (9 VAC 25-860).

2) Metals/Inorganics/Organics:

No limits for chloride, copper, lead, and zinc are needed (**Attachment 7**). There are no Virginia water quality criteria for fluoride, magnesium, sodium, potassium, bromodichloromethane, and dibromochloromethane. The levels of sulfate (210 µg/L), barium (290 µg/L), chloride (170 µg/L), and chloroform (500 µg/L; <0.5 µg/L) detected in the September 2008 sampling events from the treated water supply are well below the human health criteria of 250,000 µg/L, 2,000 µg/L, 250,000 µg/L, and 340 µg/L, respectively, for discharge to areas with a special standards designation of public water supplies.

- d. Effluent Limitations and Monitoring, Outfall 001 – Conventional and Non-Conventional Pollutants
No changes to Dissolved Oxygen (D.O.), Total Suspended Solids (TSS), and pH limitations are proposed.

- e. Effluent Limitations and Monitoring Summary.

The effluent limitations are presented in the following table. Limits were established for TSS, TRC, pH, and D.O.

The limits for TSS, pH, and TRC are based on the General Permit for Potable Water Treatment Plants (9 VAC 25-860). The limit for D.O. is included in this permit due to the use of sodium bisulfite for dechlorination and is based upon the Virginia Water Quality Standards.

Sample Type and Frequency are in accordance with the General Permit for Potable Water Treatment Plants (9 VAC 25-860) and the VPDES Permit Manual.

18. Antibacksliding:

All limits in this permit are at least as stringent as those previously established. Backsliding does not apply to this reissuance.

19. Effluent Limitations/Monitoring Requirements: Industrial Process Water Discharge

Maximum Flow of this Industrial Facility is 0.008 MGD.

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	N/A	NL	N/A	N/A	NL	1/M	Estimate
TSS (mg/L)	1, 2	30 mg/l	60 mg/l	N/A	N/A	1/M	Grab
pH (S.U.)	1, 3	N/A	N/A	6.0 S.U.	9.0 S.U.	1/M	Grab
Total Residual Chlorine	1, 2	0.011 mg/l	N/A	N/A	0.011 mg/l	1/M	Grab
D.O.	2, 3	N/A	N/A	5.0 mg/L	N/A	1/M	Grab

The basis for the limitations codes are:

MGD = Million gallons per day.

1/M = Once every month.

- General Permit for Potable Water Treatment Plants (9 VAC 25-860)
- Best Professional Judgement
- Water Quality Standards

N/A = Not applicable.

NL = No limit; monitor and report.

S.U. = Standard units.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

20. Other Permit Requirements:

- a. Part I.B. of the permit contains quantification levels and compliance reporting instructions.

9VAC25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9VAC25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

21. Other Special Conditions:

- a. O&M Manual Requirement. Required by Code of Virginia §62.1-44.19; VPDES Permit Regulation, 9VAC25-31-190.E. The permittee shall submit an Operations and Maintenance (O&M) Manual or a statement confirming the accuracy and completeness of the current O&M Manual to the Department of Environmental Quality, Northern Regional Office (DEQ-NRO) by May 30, 2011. Future changes to the facility must be addressed by the submittal of a revised O&M Manual within 90 days of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.
- b. Notification Levels. The permittee shall notify the Department as soon as they know or have reason to believe:
 - 1). That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
 - a) One hundred micrograms per liter;
 - b) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony;
 - c) Five times the maximum concentration value reported for that pollutant in the permit application; or
 - d) The level established by the Board.
 - 2). That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
 - a) Five hundred micrograms per liter;
 - b) One milligram per liter for antimony;
 - c) Ten times the maximum concentration value reported for that pollutant in the permit application; or
 - d) The level established by the Board.
- c. Materials Handling/Storage. 9VAC25-31-50.A. prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia §62.1-44.16 and §62.1-44.17 authorize the Board to regulate the discharge of industrial waste or other waste.
- d. TMDL Reopener. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL that may be developed and approved for the receiving stream.

- 22. Permit Section Part II.** Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

23. Changes to the Permit from the Previously Issued Permit:

- a. Special Conditions:
 - 1) The Upgrade of the Dechlorination Unit Special Condition has been removed from the permit.
- b. Monitoring and Effluent Limitations:
 - 1) The TRC limits were changed from 0.019 mg/L monthly average and 0.019 mg/L maximum to reflect the values in the General Permit for Potable Water Treatment Plants, 9 VAC 25-860 (0.011 mg/L monthly average and 0.011 mg/L maximum).
 - 2) TSS monitoring sample type has been changed from an eight-hour composite consisting of five grab samples to a grab sample.
- c. Other:
 - 1) It has been determined that the discharge from Outfall 001 is in Section 9 of the Potomac River Basin instead of Section 8.

- 24. Variances/Alternate Limits or Conditions:** None

25. Public Notice Information:

First Public Notice Date: 1/26/2011 Second Public Notice Date: 2/2/2011

Public Notice Information is required by 9VAC25-31-280 B. All pertinent information is on file and may be inspected and copied by contacting the: DEQ Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193, Telephone No. (703) 583-3837, anna.westernik@deq.virginia.gov. See **Attachment 8** for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may request an electronic copy of the draft permit and fact sheet or review the draft permit and application at the DEQ Northern Regional Office by appointment.

26. 303 (d) Listed Stream Segments and Total Max. Daily Loads (TMDL):

This facility discharges to Limestone Branch, UT. Limestone Branch, approximately 0.05 miles upstream from the Route 15 Bridge to the confluence with the Potomac River, is listed as not meeting the recreational use goal in the 2010 water quality assessment due to sufficient excursions from the maximum *E. coli* criterion at DEQ monitoring stations. EPA approved the Bacteria TMDL for this stream segment on July 6, 2004. The discharge from this permit is industrial and in it is staff's best professional opinion that it does not contribute to *E. coli* levels in the stream.

27. Additional Comments:

Previous Board Action(s): None

Staff Comments: None

Public Comment: No comments received during the public notice period.

EPA Checklist: The checklist can be found in **Attachment 9**.

ATTACHMENTS

Attachment 1	NPDES Permit Rating Work Sheet
Attachment 2	Facility Schematic/Diagram
Attachment 3	Waterford Topographic Map (215A)
Attachment 4	Summary of Technical Inspection Conducted on July 19, 2007
Attachment 5	Planning Statement
Attachment 6	Water Quality Criteria and WLAs
Attachment 7	Derivation of Limits for Toxic Parameters
Attachment 8	Public Notice
Attachment 9	EPA Checklist

NPDES PERMIT RATING WORK SHEETVPDES NO. : VA0090573

- ☒ Regular Addition
☐ Discretionary Addition
☐ Score change, but no status Change
☐ Deletion

Facility Name: Beacon Hill WTPCity / County: LoudounReceiving Water: Limestone Branch, UT

Reach Number: _____

Is this facility a steam electric power plant (sic =4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
 2. A nuclear power Plant
 3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

- ☐ YES; score is 700 (stop here)
☒ NO; (continue)

☐ Yes; score is 600 (stop here) ☒ NO; (continue)**FACTOR 1: Toxic Pollutant Potential**

PCS SIC Code: _____ Primary Sic Code: 4941 Other Sic Codes: _____
 Industrial Subcategory Code: 000 (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	15	<input checked="" type="checkbox"/> 7.	7	35
<input type="checkbox"/> 1.	1	5	<input type="checkbox"/> 4.	4	20	<input type="checkbox"/> 8.	8	40
<input type="checkbox"/> 2.	2	10	<input type="checkbox"/> 5.	5	25	<input type="checkbox"/> 9.	9	45
			<input type="checkbox"/> 6.	6	30	<input type="checkbox"/> 10.	10	50

Code Number Checked: 7
Total Points Factor 1: 35

FACTOR 2: Flow/Stream Flow Volume

(Complete either Section A or Section B; check only one)

Section A – Wastewater Flow Only considered

Wastewater Type (see Instructions)	Code	Points
Type I: Flow < 5 MGD	<input type="checkbox"/> 11	0
Flow 5 to 10 MGD	<input type="checkbox"/> 12	10
Flow > 10 to 50 MGD	<input type="checkbox"/> 13	20
Flow > 50 MGD	<input type="checkbox"/> 14	30
Type II: Flow < 1 MGD	<input checked="" type="checkbox"/> 21	10
Flow 1 to 5 MGD	<input type="checkbox"/> 22	20
Flow > 5 to 10 MGD	<input type="checkbox"/> 23	30
Flow > 10 MGD	<input type="checkbox"/> 24	50
Type III: Flow < 1 MGD	<input type="checkbox"/> 31	0
Flow 1 to 5 MGD	<input type="checkbox"/> 32	10
Flow > 5 to 10 MGD	<input type="checkbox"/> 33	20
Flow > 10 MGD	<input type="checkbox"/> 34	30

Section B – Wastewater and Stream Flow Considered

Wastewater Type (see Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow	Code	Points
Type I/III:	< 10 %	<input type="checkbox"/> 41	0
	10 % to < 50 %	<input type="checkbox"/> 42	10
	> 50 %	<input type="checkbox"/> 43	20
Type II:	< 10 %	<input type="checkbox"/> 51	0
	10 % to < 50 %	<input type="checkbox"/> 52	20
	> 50 %	<input type="checkbox"/> 53	30

Code Checked from Section A or B: 21
Total Points Factor 2: 10

NPDES PERMIT RATING WORK SHEET**FACTOR 3: Conventional Pollutants**

(only when limited by the permit)

A. Oxygen Demanding Pollutants: (check one) ☐ BOD ☐ COD ☐ Other: _____

Permit Limits: (check one)

<input type="checkbox"/>	< 100 lbs/day	1	0
<input type="checkbox"/>	100 to 1000 lbs/day	2	5
<input type="checkbox"/>	> 1000 to 3000 lbs/day	3	15
<input type="checkbox"/>	> 3000 lbs/day	4	20

Code Number Checked:

N/A

Points Scored:**0**

B. Total Suspended Solids (TSS)

Permit Limits: (check one)

<input checked="" type="checkbox"/>	< 100 lbs/day	1	0
<input type="checkbox"/>	100 to 1000 lbs/day	2	5
<input type="checkbox"/>	> 1000 to 5000 lbs/day	3	15
<input type="checkbox"/>	> 5000 lbs/day	4	20

Code Number Checked:

1

Points Scored:**0**

C. Nitrogen Pollutants: (check one)

☐ Ammonia ☐ Other: _____

Permit Limits: (check one)

<input type="checkbox"/>	<i>Nitrogen Equivalent</i>	Code	Points
<input type="checkbox"/>	< 300 lbs/day	1	0
<input type="checkbox"/>	300 to 1000 lbs/day	2	5
<input type="checkbox"/>	> 1000 to 3000 lbs/day	3	15
<input type="checkbox"/>	> 3000 lbs/day	4	20

Code Number Checked:

N/A

Points Scored:**0****Total Points Factor 3:****0****FACTOR 4: Public Health Impact**

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this include any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above reference supply.

☒ YES; (If yes, check toxicity potential number below)☐ NO; (If no, go to Factor 5)

Determine the *Human Health* potential from Appendix A. Use the same SIC doe and subcategory reference as in Factor 1.
(Be sure to use the *Human Health* toxicity group column – check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	0	<input checked="" type="checkbox"/> 7.	7	15
<input type="checkbox"/> 1.	1	0	<input type="checkbox"/> 4.	4	0	<input type="checkbox"/> 8.	8	20
<input type="checkbox"/> 2.	2	0	<input type="checkbox"/> 5.	5	5	<input type="checkbox"/> 9.	9	25
			<input type="checkbox"/> 6.	6	10	<input type="checkbox"/> 10.	10	30

Code Number Checked:

7

Total Points Factor 4:**15**

NPDES PERMIT RATING WORK SHEET

FACTOR 5: Water Quality Factors

- A. Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-based federal effluent guidelines or technology-based state effluent guidelines) or has a wasteload allocation been given to the discharge?

	Code	Points
<input checked="" type="checkbox"/> YES	1	10
<input type="checkbox"/> NO	2	0

- B. Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?

	Code	Points
<input checked="" type="checkbox"/> YES	1	0
<input type="checkbox"/> NO	2	5

- C. Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?

	Code	Points
<input type="checkbox"/> YES	1	10
<input checked="" type="checkbox"/> NO	2	0

Code Number Checked: A 1 B 1 C 2
Points Factor 5: A 10 + B 0 + C 0 = 10

FACTOR 6: Proximity to Near Coastal Waters

- A. Base Score: Enter flow code here (from factor 2) 21

Check appropriate facility HPRI code (from PCS):

HPRI#	Code	HPRI Score
<input type="checkbox"/> 1	1	20
<input type="checkbox"/> 2	2	0
<input type="checkbox"/> 3	3	30
<input checked="" type="checkbox"/> 4	4	0
<input type="checkbox"/> 5	5	20

Enter the multiplication factor that corresponds to the flow code: 0.3

Flow Code	Multiplication Factor
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

HPRI code checked : 4

Base Score (HPRI Score): 0 X (Multiplication Factor) 0.1 = 0

- B. Additional Points – NEP Program

For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay? **N/A**

Code	Points
<input type="checkbox"/> 1	10
<input type="checkbox"/> 2	0

- C. Additional Points – Great Lakes Area of Concern

For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 areas of concern (see instructions)? **N/A**

Code	Points
<input type="checkbox"/> 1	10
<input type="checkbox"/> 2	0

Code Number Checked: A 4 B N/A C N/A
Points Factor 6: A 0 + B 0 + C 0 = 0

NPDES PERMIT RATING WORK SHEET

VA0053121

SCORE SUMMARY

<u>Factor</u>	<u>Description</u>	<u>Total Points</u>
1	Toxic Pollutant Potential	35
2	Flows / Streamflow Volume	10
3	Conventional Pollutants	0
4	Public Health Impacts	15
5	Water Quality Factors	10
6	Proximity to Near Coastal Waters	0
TOTAL (Factors 1 through 6)		70

S1. Is the total score equal to or greater than 80 ☐ YES; (Facility is a Major) ☒ NO

S2. If the answer to the above questions is no, would you like this facility to be discretionary major?

☒ NO

☐ YES; (Add 500 points to the above score and provide reason below:

Reason:

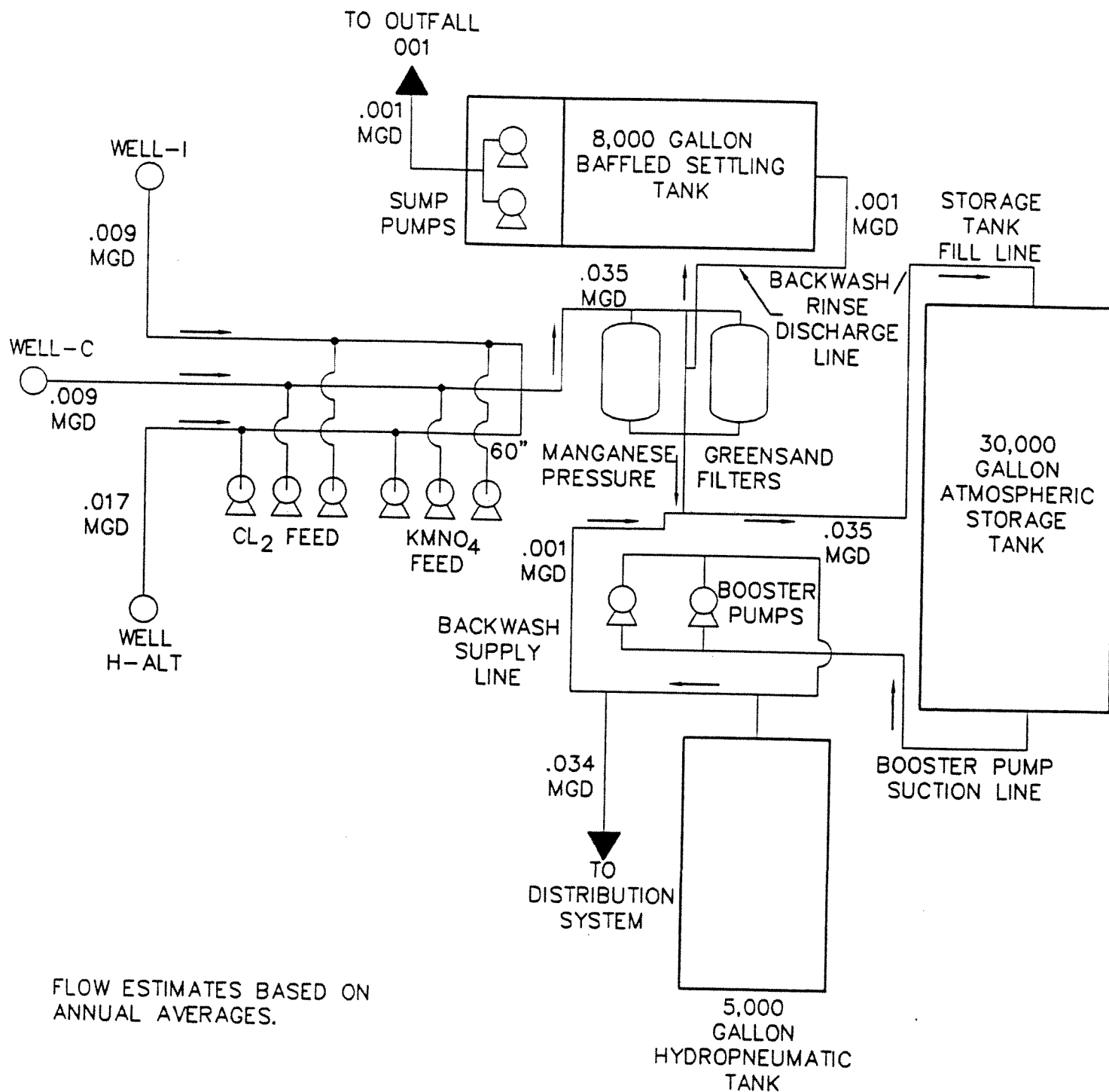
NEW SCORE : 70

OLD SCORE : 70

Permit Reviewer's Name : Anna Westernik

Phone Number: 703-583-3837

Date: November 2, 2010



Rickmond Engineering, Inc.

Engineering Surveying Land Planning
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**BEACON HILL
WTP**

LINE DRAWING

PROJ. NO.: 99158

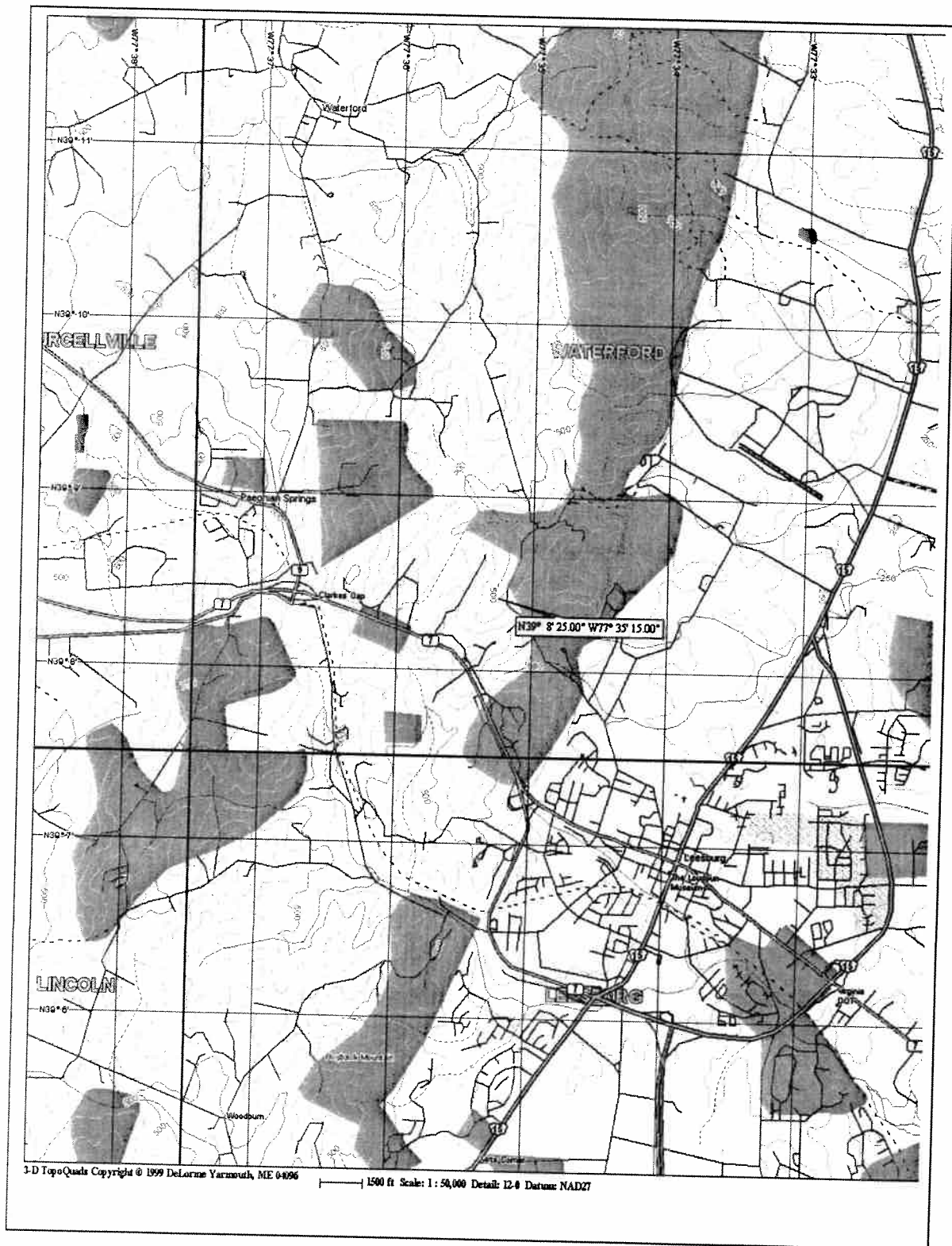
DWG:

DATE: 5/30/00

SCALE: NTS

SHEET 1 OF 1

Location of Outfall 001 of the Beacon Hill WTP (VA0090573)



INSPECTION SUMMARY

- This is the first technical inspection at this facility.
- The facility and grounds are well maintained; records and documentation are well kept.
- The Hach colorimeter was certified by central lab at Raspberry Falls on 9-26-07. LCSA recently received spec checks and has started quarterly checks of all field equipment. Documentation received by DEQ on June 21, 2007 shows the colorimeter was checked with Hach high range spec checks on 6-19-2007.
- DO/pH multimeter was checked against an NIST thermometer on 5-5-07; the correction factor is + 0.1 ° C.
- Meters are stored and calibrated at Waterford STP, than carried to field sites by the operators. Calibration and maintenance records are kept at the STP.
- The floor drains in the water treatment plant empty to a small depression next to the WTP building and potentially discharge potable water without treatment. Under normal circumstances, flow though this drain system would be minimal and water appears to seep into the ground before it reaches a stream or pond.

RECCOMENDATIONS FOR ACTION

- For the wastewater analyses, pocket colorimeters should be checked quarterly with low range standards to demonstrate that the colorimeter accurately reads low concentration samples.
- Because the floor drains discharge directly to the environment, the DEQ recommends that secondary containment be placed around the sodium hypochlorite and potassium permanganate solution tanks to prevent environmental impacts from potential chemical spills.

To: Anna Westernik
From: Jennifer Carlson

Date: October 19, 2010
Subject: Planning Statement for the Beacon Hill WTP
Permit No: VA0090573

Discharge Type: Industrial
Discharge Flow: 0.008 MGD Maximum 30-Day Value

Receiving Stream: UT to Limestone Branch
Latitude / Longitude: 39°08'25"/77°35'15"
Streamcode: 1aXLY
Rivermile: 0.63
Waterbody: A03R/PL05
Water Quality Stds: Class III, Section 9

1. Is there monitoring data for the receiving stream?

There is no monitoring data for the unnamed tributary to Limestone Branch

- If yes, please attach latest summary.
- If no, where is the nearest downstream monitoring station.

The nearest downstream DEQ ambient monitoring station is 1aXGJ000.42, located approximately 4.0 miles downstream of Outfall 001 on another unnamed tributary to Limestone Branch. Station 1aXGJ000.42 is in assessment unit, VAN-A03R_XGJ01A04, which begins at the boundary of the Section 8 Public Water Supply (PWS) area designation and continues downstream to the confluence with Limestone Branch. The following is a monitoring summary for this segment of the unnamed tributary to Limestone Branch, as taken from the Draft 2010 Integrated Assessment:

Class III, Section 8, special stds. PWS.

DEQ ambient water quality monitoring station 1aXGJ000.42. Citizen monitoring station 1aXGJ-16-LWC.

The aquatic life and wildlife uses are considered fully supporting. Citizen monitoring finds a medium probability of adverse conditions for biota, noted by an observed effect for the aquatic life use. There is insufficient information to determine use support for the recreation use. The fish consumption and public water supply uses were not assessed.

4. Is there monitoring or other conditions that Planning/Assessment needs in the permit?

Not at this time.

5. Could you please calculate the drainage area at the outfall? 0.15 mi²

6. Fact Sheet Requirements – Please provide information on other individual VPDES permits or VA DEQ monitoring stations located within a 2 mile radius of the facility. In addition, please provide information on any drinking water intakes located within a 5 mile radius of the facility.

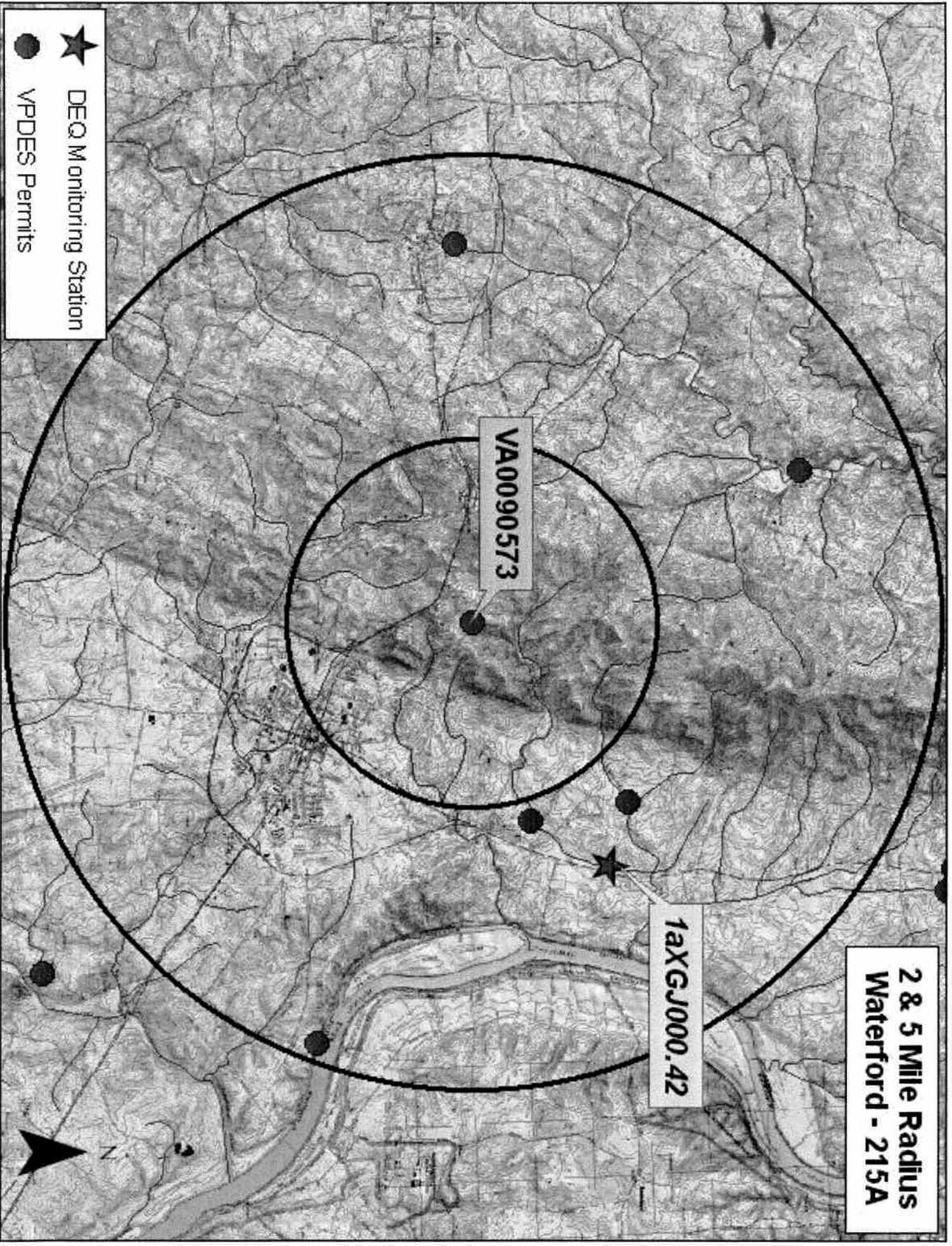
Within a 2 miles radius of this facility, there are no other individual VPDES permits or DEQ monitoring stations. There is one public water supply intake located within a 5 mile radius for the Town of Leesburg.

**2 & 5 Mile Radius
Waterford - 215A**

1aXGJ000.42

VA0090573

- ★ DEQ Monitoring Station
- VPDES Permits



FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Beacon Hill WTP

Permit No.: VA0090573

Receiving Stream: UT to Limestone Branch

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information

Mean Hardness (as CaCO₃) = mg/L
 90% Temperature (Annual) = deg C
 90% Temperature (Wet season) = deg C
 90% Maximum pH = SU
 10% Maximum pH = SU
 Tier Designation (1 or 2) = 1
 Public Water Supply (PWS) Y/N? = Y
 Trout Present Y/N? = n
 Early Life Stages Present Y/N? = y

Stream Flows

1Q10 (Annual) = 0 MGD
 7Q10 (Annual) = 0 MGD
 3Q10 (Annual) = 0 MGD
 1Q10 (Wet season) = 0 MGD
 3Q10 (Wet season) = 0 MGD
 3Q10 (Wet season) = 0 MGD
 Harmonic Mean = 0 MGD

Mixing Information

Annual - 1Q10 Mix = 100 %
 - 7Q10 Mix = 100 %
 - 3Q10 Mix = 100 %
 Wet Season - 1Q10 Mix = 100 %
 - 3Q10 Mix = 100 %

Effluent Information

Mean Hardness (as CaCO₃) = 180 mg/L
 90% Temp (Annual) = deg C
 90% Temp (Wet season) = deg C
 90% Maximum pH = SU
 10% Maximum pH = SU
 Discharge Flow = 0.0078 MGD

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)
Acenaphthene	0	--	--	6.7E+02	9.9E+02	--	--	6.7E+02	9.9E+02	--	--	--	--	--	--	6.7E+02
Acrolein	0	--	--	6.1E+00	9.3E+00	--	--	6.1E+00	9.3E+00	--	--	--	--	--	--	6.1E+00
Acrylonitrile ^c	0	--	--	5.1E-01	2.5E+00	--	--	5.1E-01	2.5E+00	--	--	--	--	--	--	5.1E-01
Aldrin ^c	0	3.0E+00	--	4.9E-04	5.0E-04	3.0E+00	--	4.9E-04	5.0E-04	--	--	--	--	3.0E+00	--	4.9E-04
Ammonia-N (mg/l) (Yearly)	0	5.84E+01	7.09E+00	--	--	5.8E+01	7.1E+00	--	--	--	--	--	--	5.8E+01	7.1E+00	--
Ammonia-N (mg/l) (High Flow)	0	5.84E+01	7.09E+00	--	--	5.8E+01	7.1E+00	--	--	--	--	--	--	5.8E+01	7.1E+00	--
Anthraccene	0	--	--	8.3E+03	4.0E+04	--	--	8.3E+03	4.0E+04	--	--	--	--	--	8.3E+03	4.0E+04
Antimony	0	--	--	5.6E+00	6.4E+02	--	--	5.6E+00	6.4E+02	--	--	--	--	--	5.6E+00	6.4E+02
Arsenic	0	3.4E+02	1.5E+02	1.0E+01	--	3.4E+02	1.5E+02	1.0E+01	--	--	--	--	--	3.4E+02	1.5E+02	1.0E+01
Barium	0	--	--	2.0E+03	--	--	--	2.0E+03	--	--	--	--	--	--	2.0E+03	--
Benzene ^c	0	--	--	2.2E+01	5.1E+02	--	--	2.2E+01	5.1E+02	--	--	--	--	--	2.2E+01	5.1E+02
Benzidine ^c	0	--	--	8.6E-04	2.0E-03	--	--	8.6E-04	2.0E-03	--	--	--	--	--	8.6E-04	2.0E-03
Benzo (a) anthracene ^c	0	--	--	3.8E-02	1.8E-01	--	--	3.8E-02	1.8E-01	--	--	--	--	--	3.8E-02	1.8E-01
Benzo (b) fluoranthene ^c	0	--	--	3.8E-02	1.8E-01	--	--	3.8E-02	1.8E-01	--	--	--	--	--	3.8E-02	1.8E-01
Benzo (k) fluoranthene ^c	0	--	--	3.8E-02	1.8E-01	--	--	3.8E-02	1.8E-01	--	--	--	--	--	3.8E-02	1.8E-01
Benzo (a) pyrene ^c	0	--	--	3.8E-02	1.8E-01	--	--	3.8E-02	1.8E-01	--	--	--	--	--	3.8E-02	1.8E-01
Bis(2-Chloroethyl) Ether ^c	0	--	--	3.0E-01	5.3E+00	--	--	3.0E-01	5.3E+00	--	--	--	--	--	3.0E-01	5.3E+00
Bis(2-Chloroisopropyl) Ether	0	--	--	1.4E+03	6.5E+04	--	--	1.4E+03	6.5E+04	--	--	--	--	--	1.4E+03	6.5E+04
Bis 2-Ethylhexyl Phthalate ^c	0	--	--	1.2E+01	2.2E+01	--	--	1.2E+01	2.2E+01	--	--	--	--	--	1.2E+01	2.2E+01
Bromoform ^c	0	--	--	4.3E+01	1.4E+03	--	--	4.3E+01	1.4E+03	--	--	--	--	--	4.3E+01	1.4E+03
Butylbenzylphthalate	0	--	--	1.5E+03	1.9E+03	--	--	1.5E+03	1.9E+03	--	--	--	--	--	1.5E+03	1.9E+03
Cadmium	0	7.6E+00	1.8E+00	5.0E+00	--	7.6E+00	1.8E+00	5.0E+00	--	--	--	--	--	7.6E+00	1.8E+00	5.0E+00
Carbon Tetrachloride ^c	0	--	--	2.3E+00	1.6E+01	--	--	2.3E+00	1.6E+01	--	--	--	--	--	2.3E+00	1.6E+01
Chlordane ^c	0	2.4E+00	4.3E-03	8.0E-03	8.1E-03	2.4E+00	4.3E-03	8.0E-03	8.1E-03	--	--	--	--	2.4E+00	4.3E-03	8.0E-03
Chloride	0	8.6E+05	2.3E+05	2.5E+05	--	8.6E+05	2.3E+05	2.5E+05	--	--	--	--	--	8.6E+05	2.3E+05	2.5E+05

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)
TRC	0	1.9E+01	1.1E+01	--	--	1.9E+01	1.1E+01	--	--	--	--	--	--	1.9E+01	1.1E+01	--
Chlorobenzene	0	--	--	1.3E+02	1.6E+03	--	--	1.3E+02	1.6E+03	--	--	--	--	--	--	1.3E+02 1.6E+03

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)
Chlorodibromomethane ^c	0	--	--	4.0E+00	1.3E+02	--	--	4.0E+00	1.3E+02	--	--	--	--	--	--	4.0E+00
Chloroform	0	--	--	3.4E+02	1.1E+04	--	--	3.4E+02	1.1E+04	--	--	--	--	--	--	3.4E+02
2-Chloronaphthalene	0	--	--	1.0E+03	1.6E+03	--	--	1.0E+03	1.6E+03	--	--	--	--	--	--	1.0E+03
2-Chlorophenol	0	--	--	8.1E+01	1.5E+02	--	--	8.1E+01	1.5E+02	--	--	--	--	--	--	8.1E+01
Chlorpyrifos	0	8.3E-02	4.1E-02	--	--	8.3E-02	4.1E-02	--	--	8.3E-02	4.1E-02	--	--	8.3E-02	4.1E-02	--
Chromium III	0	9.2E+02	1.2E+02	--	--	9.2E+02	1.2E+02	--	--	9.2E+02	1.2E+02	--	--	9.2E+02	1.2E+02	--
Chromium VI	0	1.6E+01	1.1E+01	--	--	1.6E+01	1.1E+01	--	--	1.6E+01	1.1E+01	--	--	1.6E+01	1.1E+01	--
Chromium, Total	0	--	--	1.0E+02	--	--	--	1.0E+02	--	--	--	--	--	--	--	1.0E+02
Chrysene ^c	0	--	--	3.8E-03	1.8E-02	--	--	3.8E-03	1.8E-02	--	--	--	--	--	--	3.8E-03
Copper	0	2.3E+01	1.5E+01	1.3E+03	--	2.3E+01	1.5E+01	1.3E+03	--	--	--	--	--	2.3E+01	1.5E+01	1.3E+03
Cyanide, Free	0	2.2E+01	5.2E+00	1.4E+02	1.6E+04	2.2E+01	5.2E+00	1.4E+02	1.6E+04	--	--	--	--	2.2E+01	5.2E+00	1.4E+02
DDD ^c	0	--	--	3.1E-03	3.1E-03	--	--	3.1E-03	3.1E-03	--	--	--	--	--	--	3.1E-03
DDE ^c	0	--	--	2.2E-03	2.2E-03	--	--	2.2E-03	2.2E-03	--	--	--	--	--	--	2.2E-03
DDT ^c	0	1.1E+00	1.0E-03	2.2E-03	2.2E-03	1.1E+00	1.0E-03	2.2E-03	2.2E-03	--	--	--	--	1.1E+00	1.0E-03	2.2E-03
Demeton	0	--	1.0E-01	--	--	--	1.0E-01	--	--	--	--	--	--	--	1.0E-01	--
Diazinon	0	1.7E-01	1.7E-01	--	--	1.7E-01	1.7E-01	--	--	--	--	--	--	1.7E-01	1.7E-01	--
Dibenz(a,h)anthracene ^c	0	--	--	3.8E-02	1.8E-01	--	--	3.8E-02	1.8E-01	--	--	--	--	--	--	3.8E-02
1,2-Dichlorobenzene	0	--	--	4.2E+02	1.3E+03	--	--	4.2E+02	1.3E+03	--	--	--	--	--	--	4.2E+02
1,3-Dichlorobenzene	0	--	--	3.2E+02	9.6E+02	--	--	3.2E+02	9.6E+02	--	--	--	--	--	--	3.2E+02
1,4-Dichlorobenzene	0	--	--	6.3E+01	1.9E+02	--	--	6.3E+01	1.9E+02	--	--	--	--	--	--	6.3E+01
3,3-Dichlorobenzidine ^c	0	--	--	2.1E-01	2.8E-01	--	--	2.1E-01	2.8E-01	--	--	--	--	--	--	2.1E-01
Dichlorobromomethane ^c	0	--	--	5.5E+00	1.7E+02	--	--	5.5E+00	1.7E+02	--	--	--	--	--	--	5.5E+00
1,2-Dichloroethane ^c	0	--	--	3.8E+00	3.7E+02	--	--	3.8E+00	3.7E+02	--	--	--	--	--	--	3.8E+00
1,1-Dichloroethylene	0	--	--	3.3E+02	7.1E+03	--	--	3.3E+02	7.1E+03	--	--	--	--	--	--	3.3E+02
1,2-trans-dichloroethylene	0	--	--	1.4E+02	1.0E+04	--	--	1.4E+02	1.0E+04	--	--	--	--	--	--	1.4E+02
2,4-Dichlorophenol	0	--	--	7.7E+01	2.9E+02	--	--	7.7E+01	2.9E+02	--	--	--	--	--	--	7.7E+01
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	1.0E+02	--	--	--	1.0E+02	--	--	--	--	--	--	--	1.0E+02
1,2-Dichloropropane ^c	0	--	--	5.0E+00	1.5E+02	--	--	5.0E+00	1.5E+02	--	--	--	--	--	--	5.0E+00
1,3-Dichloropropene ^c	0	--	--	3.4E+00	2.1E+02	--	--	3.4E+00	2.1E+02	--	--	--	--	--	--	3.4E+00
Dieldrin ^c	0	2.4E-01	5.6E-02	5.2E-04	5.4E-04	2.4E-01	5.6E-02	5.2E-04	5.4E-04	--	--	--	--	2.4E-01	5.6E-02	5.2E-04
Diethyl Phthalate	0	--	--	1.7E+04	4.4E+04	--	--	1.7E+04	4.4E+04	--	--	--	--	--	--	1.7E+04
2,4-Dimethylphenol	0	--	--	3.8E+02	8.5E+02	--	--	3.8E+02	8.5E+02	--	--	--	--	--	--	3.8E+02
Dimethyl Phthalate	0	--	--	2.7E+05	1.1E+06	--	--	2.7E+05	1.1E+06	--	--	--	--	--	--	2.7E+05
Di-n-Buryl Phthalate	0	--	--	2.0E+03	4.5E+03	--	--	2.0E+03	4.5E+03	--	--	--	--	--	--	2.0E+03
2,4 Dinitrophenol	0	--	--	6.9E+01	5.3E+03	--	--	6.9E+01	5.3E+03	--	--	--	--	--	--	6.9E+01
2-Methyl-4,6-Dinitrophenol	0	--	--	1.3E+01	2.8E+02	--	--	1.3E+01	2.8E+02	--	--	--	--	--	--	1.3E+01
2,4-Dinitrotoluene ^c	0	--	--	1.1E+00	3.4E+01	--	--	1.1E+00	3.4E+01	--	--	--	--	--	--	1.1E+00
Dioxin 2,3,7,8- tetrachlorodibenzo-p-dioxin	0	--	--	5.0E-08	5.1E-08	--	--	5.0E-08	5.1E-08	--	--	--	--	--	--	5.0E-08
1,2-Diphenylhydrazine ^c	0	--	--	3.6E-01	2.0E+00	--	--	3.6E-01	2.0E+00	--	--	--	--	--	--	3.6E-01
Alpha-Endosulfan	0	2.2E-01	5.6E-02	6.2E+01	8.9E+01	2.2E-01	5.6E-02	6.2E+01	8.9E+01	--	--	--	--	2.2E-01	5.6E-02	6.2E+01
Beta-Endosulfan	0	2.2E-01	5.6E-02	6.2E+01	8.9E+01	2.2E-01	5.6E-02	6.2E+01	8.9E+01	--	--	--	--	2.2E-01	5.6E-02	6.2E+01
Alpha + Beta Endosulfan	0	2.2E-01	5.6E-02	--	--	2.2E-01	5.6E-02	--	--	--	--	--	--	2.2E-01	5.6E-02	--
Endosulfan Sulfate	0	--	--	6.2E+01	8.9E+01	--	--	6.2E+01	8.9E+01	--	--	--	--	--	--	6.2E+01
Endrin	0	8.6E-02	3.6E-02	5.9E-02	6.0E-02	8.6E-02	3.6E-02	5.9E-02	6.0E-02	--	--	--	--	8.6E-02	3.6E-02	5.9E-02

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)
Endrin Aldehyde	0	--	--	2.9E-01	3.0E-01	--	--	2.9E-01	3.0E-01	--	--	--	--	--	--	3.0E-01

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	5.3E+02	2.1E+03	--	--	5.3E+02	2.1E+03	--	--	--	--	--	--	--	--	--	--	5.3E+02	2.1E+03
Fluoranthene	0	--	--	1.3E+02	1.4E+02	--	--	1.3E+02	1.4E+02	--	--	--	--	--	--	--	--	--	--	1.3E+02	1.4E+02
Fluorene	0	--	--	1.1E+03	5.3E+03	--	--	1.1E+03	5.3E+03	--	--	--	--	--	--	--	--	--	--	1.1E+03	5.3E+03
Foaming Agents	0	--	--	5.0E+02	--	--	--	5.0E+02	--	--	--	--	--	--	--	--	--	--	--	5.0E+02	--
Guthion	0	--	1.0E-02	--	--	--	1.0E-02	--	--	--	--	--	--	--	--	--	--	--	1.0E-02	--	--
Heptachlor ^c	0	5.2E-01	3.8E-03	7.9E-04	7.9E-04	5.2E-01	3.8E-03	7.9E-04	7.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	7.9E-04	7.9E-04
Heptachlor Epoxide ^c	0	5.2E-01	3.8E-03	3.9E-04	3.9E-04	5.2E-01	3.8E-03	3.9E-04	3.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	3.9E-04	3.9E-04
Hexachlorobenzene ^c	0	--	--	2.8E-03	2.9E-03	--	--	2.8E-03	2.9E-03	--	--	--	--	--	--	--	--	--	--	2.8E-03	2.9E-03
Hexachlorobutadiene ^c	0	--	--	4.4E+00	1.8E+02	--	--	4.4E+00	1.8E+02	--	--	--	--	--	--	--	--	--	--	4.4E+00	1.8E+02
Hexachlorocyclohexane	0	--	--	2.6E-02	4.9E-02	--	--	2.6E-02	4.9E-02	--	--	--	--	--	--	--	--	--	--	2.6E-02	4.9E-02
Alpha-BHC ^c	0	--	--	9.1E-02	1.7E-01	--	--	9.1E-02	1.7E-01	--	--	--	--	--	--	--	--	--	--	9.1E-02	1.7E-01
Beta-BHC ^c	0	--	--	9.8E-01	1.8E+00	9.5E-01	--	9.8E-01	1.8E+00	--	--	--	--	--	--	--	--	9.5E-01	--	9.8E-01	1.8E+00
Hexachlorocyclohexane	0	--	--	4.0E+01	1.1E+03	--	--	4.0E+01	1.1E+03	--	--	--	--	--	--	--	--	--	--	4.0E+01	1.1E+03
Gamma-BHC ^c (Lindane)	0	--	--	1.4E+01	3.3E+01	--	--	1.4E+01	3.3E+01	--	--	--	--	--	--	--	--	--	--	1.4E+01	3.3E+01
Hexachlorocyclopentadiene	0	--	2.0E+00	--	--	--	2.0E+00	--	--	--	--	--	--	--	--	--	--	--	2.0E+00	--	--
Hexachloroethane ^c	0	--	--	3.8E-02	1.8E-01	--	--	3.8E-02	1.8E-01	--	--	--	--	--	--	--	--	--	--	3.8E-02	1.8E-01
Hydrogen Sulfide	0	--	--	3.0E+02	--	--	--	3.0E+02	--	--	--	--	--	--	--	--	--	--	--	3.0E+02	--
Indeno (1,2,3-cd) pyrene ^c	0	--	--	3.5E+02	9.6E+03	--	--	3.5E+02	9.6E+03	--	--	--	--	--	--	--	--	--	--	3.5E+02	9.6E+03
Iron	0	--	0.0E+00	--	--	--	0.0E+00	--	--	--	--	--	--	--	--	--	--	--	0.0E+00	--	--
Isophorone ^c	0	--	2.5E+02	2.9E+01	1.5E+01	2.5E+02	2.9E+01	1.5E+01	--	--	--	--	--	--	--	--	--	2.5E+02	2.9E+01	1.5E+01	--
Kepone	0	--	1.0E-01	--	--	--	1.0E-01	--	--	--	--	--	--	--	--	--	--	--	1.0E-01	--	--
Lead	0	--	--	5.0E+01	--	--	--	5.0E+01	--	--	--	--	--	--	--	--	--	--	--	5.0E+01	--
Malathion	0	--	7.7E-01	--	--	1.4E+00	7.7E-01	--	--	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	--	--
Manganese	0	--	--	4.7E+01	1.5E+03	--	--	4.7E+01	1.5E+03	--	--	--	--	--	--	--	--	--	--	4.7E+01	1.5E+03
Mercury	0	--	--	4.6E+01	5.9E+03	--	--	4.6E+01	5.9E+03	--	--	--	--	--	--	--	--	--	--	4.6E+01	5.9E+03
Methyl Bromide	0	--	3.0E-02	1.0E+02	--	--	3.0E-02	1.0E+02	--	--	--	--	--	--	--	--	--	--	3.0E-02	1.0E+02	--
Methylene Chloride ^c	0	--	0.0E+00	--	--	--	0.0E+00	--	--	--	--	--	--	--	--	--	--	--	0.0E+00	--	--
Methoxychlor	0	3.0E+02	3.3E+01	6.1E+02	4.6E+03	3.0E+02	3.3E+01	6.1E+02	4.6E+03	--	--	--	--	--	--	--	--	3.0E+02	3.3E+01	6.1E+02	4.6E+03
Mirex	0	--	--	1.0E+04	--	--	--	1.0E+04	--	--	--	--	--	--	--	--	--	--	--	1.0E+04	--
Nickel	0	--	--	1.7E+01	6.9E+02	--	--	1.7E+01	6.9E+02	--	--	--	--	--	--	--	--	--	--	1.7E+01	6.9E+02
Nitrate (as N)	0	--	--	6.9E-03	3.0E+01	--	--	6.9E-03	3.0E+01	--	--	--	--	--	--	--	--	--	--	6.9E-03	3.0E+01
Nitrobenzene	0	--	--	3.3E+01	6.0E+01	--	--	3.3E+01	6.0E+01	--	--	--	--	--	--	--	--	--	--	3.3E+01	6.0E+01
N-Nitrosodimethylamine ^c	0	--	--	5.0E-02	5.1E+00	--	--	5.0E-02	5.1E+00	--	--	--	--	--	--	--	--	--	--	5.0E-02	5.1E+00
N-Nitrosodiphenylamine ^c	0	2.8E+01	6.6E+00	--	--	2.8E+01	6.6E+00	--	--	--	--	--	--	--	--	--	--	2.8E+01	6.6E+00	--	--
N-Nitrosodi-n-propylamine ^c	0	6.5E-02	1.3E-02	--	--	6.5E-02	1.3E-02	--	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	--	--
Nonylphenol	0	--	1.4E-02	6.4E-04	6.4E-04	--	1.4E-02	6.4E-04	6.4E-04	--	--	--	--	--	--	--	--	--	1.4E-02	6.4E-04	6.4E-04
Parathion	0	--	5.9E-03	2.7E+00	3.0E+01	7.7E-03	5.9E-03	2.7E+00	3.0E+01	--	--	--	--	--	--	--	--	7.7E-03	5.9E-03	2.7E+00	3.0E+01
PCB Total ^c	0	--	--	1.0E+04	8.6E+05	--	--	1.0E+04	8.6E+05	--	--	--	--	--	--	--	--	--	--	1.0E+04	8.6E+05
Pentachlorophenol ^c	0	7.7E-03	5.9E-03	2.7E+00	3.0E+01	7.7E-03	5.9E-03	2.7E+00	3.0E+01	--	--	--	--	--	--	--	--	7.7E-03	5.9E-03	2.7E+00	3.0E+01
Phenol	0	--	--	8.3E+02	4.0E+03	--	--	8.3E+02	4.0E+03	--	--	--	--	--	--	--	--	--	--	8.3E+02	4.0E+03
Pyrene	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radionuclides	0	--	--	1.5E+01	--	--	--	1.5E+01	--	--	--	--	--	--	--	--	--	--	--	1.5E+01	--
Gross Alpha Activity (pCi/L)	0	--	--	4.0E+00	4.0E+00	--	--	4.0E+00	4.0E+00	--	--	--	--	--	--	--	--	--	--	4.0E+00	4.0E+00
Beta and Photon Activity (mrem/yr)	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Radium 226 + 228 (pCi/L)	0	--	--	5.0E+00	--	--	--	5.0E+00	--	--	--	--	--	--	--	--	--	--	--	5.0E+00	--
Uranium (ug/l)	0	--	--	3.0E+01	--	--	--	3.0E+01	--	--	--	--	--	--	--	--	--	--	--	3.0E+01	--

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Selenium, Total Recoverable	0	2.0E+01	5.0E+00	1.7E+02	4.2E+03	2.0E+01	5.0E+00	1.7E+02	4.2E+03	-	-	-	-	-	-	-	-	2.0E+01	5.0E+00	1.7E+02	4.2E+03
Silver	0	9.5E+00	-	-	-	9.5E+00	-	-	-	-	-	-	-	-	-	-	-	9.5E+00	-	-	-
Sulfate	0	-	-	2.5E+05	-	-	-	2.5E+05	-	-	-	-	-	-	-	-	-	-	-	2.5E+05	-
1,1,2,2-Tetrachloroethane ^C	0	-	-	1.7E+00	4.0E+01	-	-	1.7E+00	4.0E+01	-	-	-	-	-	-	-	-	-	-	1.7E+00	4.0E+01
Tetrachloroethylene ^C	0	-	-	6.9E+00	3.3E+01	-	-	6.9E+00	3.3E+01	-	-	-	-	-	-	-	-	-	-	6.9E+00	3.3E+01
Thallium	0	-	-	2.4E-01	4.7E-01	-	-	2.4E-01	4.7E-01	-	-	-	-	-	-	-	-	-	-	2.4E-01	4.7E-01
Toluene	0	-	-	5.1E+02	6.0E+03	-	-	5.1E+02	6.0E+03	-	-	-	-	-	-	-	-	-	-	5.1E+02	6.0E+03
Total dissolved solids	0	-	-	5.0E+05	-	-	-	5.0E+05	-	-	-	-	-	-	-	-	-	-	-	5.0E+05	-
Toxaphene ^C	0	7.3E-01	2.0E-04	2.8E-03	2.8E-03	7.3E-01	2.0E-04	2.8E-03	2.8E-03	-	-	-	-	-	-	-	-	7.3E-01	2.0E-04	2.8E-03	2.8E-03
Tributyltin	0	4.6E-01	7.2E-02	-	-	4.6E-01	7.2E-02	-	-	-	-	-	-	-	-	-	-	4.6E-01	7.2E-02	-	-
1,2,4-Trichlorobenzene	0	-	-	3.5E+01	7.0E+01	-	-	3.5E+01	7.0E+01	-	-	-	-	-	-	-	-	-	-	3.5E+01	7.0E+01
1,1,2-Trichloroethane ^C	0	-	-	5.9E+00	1.6E+02	-	-	5.9E+00	1.6E+02	-	-	-	-	-	-	-	-	-	-	5.9E+00	1.6E+02
Trichloroethylene ^C	0	-	-	2.5E+01	3.0E+02	-	-	2.5E+01	3.0E+02	-	-	-	-	-	-	-	-	-	-	2.5E+01	3.0E+02
2,4,6-Trichlorophenol ^C	0	-	-	1.4E+01	2.4E+01	-	-	1.4E+01	2.4E+01	-	-	-	-	-	-	-	-	-	-	1.4E+01	2.4E+01
2-(2,4,5-Trichlorophenoxy)propionic acid (Silvex)	0	-	-	5.0E+01	-	-	-	5.0E+01	-	-	-	-	-	-	-	-	-	-	-	5.0E+01	-
Vinyl Chloride ^C	0	-	-	2.5E-01	2.4E+01	-	-	2.5E-01	2.4E+01	-	-	-	-	-	-	-	-	-	-	2.5E-01	2.4E+01
Zinc	0	1.9E+02	1.9E+02	7.4E+03	2.6E+04	1.9E+02	1.9E+02	7.4E+03	2.6E+04	-	-	-	-	-	-	-	-	1.9E+02	1.9E+02	7.4E+03	2.6E+04

Notes:

- All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
- Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
- Metals measured as Dissolved, unless specified otherwise
- "C" indicates a carcinogenic parameter
- Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
Antidegradation WLAs are based upon a complete mix.
Antidegrad. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
= (0.1(WQC - background conc.) + background conc.) for human health
- WLAs established at the following stream flows: IQ10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens and Harmonic Mean for Carcinogens. To apply mixing ratios from a model set the stream flow equal to (mixing ratio - 1), effluent flow equal to 1 and 100% mix.

Metal	Target Value (SSTV)
Antimony	5.6E+00
Arsenic	1.0E+01
Barium	2.0E+03
Cadmium	1.1E+00
Chromium III	7.2E+01
Chromium VI	6.4E+00
Copper	8.9E+00
Iron	3.0E+02
Lead	1.5E+01
Manganese	5.0E+01
Mercury	4.6E-01
Nickel	2.0E+01
Selenium	3.0E+00
Silver	3.8E+00
Zinc	7.7E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

11/23/2010 9:56:20 AM

Facility = Beacon Hill WTP
Chemical = Chloride
Chronic averaging period = 4
WLAa = 860000
WLAc =
Q.L. = .1
samples/mo. = 1
samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 17000
Variance = 1040400
C.V. = 0.6
97th percentile daily values = 41368.0
97th percentile 4 day average = 28284.4
97th percentile 30 day average = 20502.9
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

No Limit is required for this material

The data are:

17000

11/23/2010 9:59:01 AM

Facility = Beacon Hill WTP
Chemical = Copper
Chronic averaging period = 4
WLAa = 23
WLAc =
Q.L. = 5
samples/mo. = 1
samples/wk. = 1

Summary of Statistics:

observations = 8
Expected Value = 8.47566
Variance = 25.8612
C.V. = 0.6
97th percentile daily values = 20.6248
97th percentile 4 day average = 14.1017
97th percentile 30 day average = 10.2221
< Q.L. = 2
Model used = BPJ Assumptions, Type 1 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 0
Average Weekly limit = 0
Average Monthly Limit = 0

The data are:

33
63
25
46
48
7
0
0

11/23/2010 10:00:54 AM

Facility = Beacon Hill WTP
Chemical = Lead
Chronic averaging period = 4
WLAa = 250
WLAc =
Q.L. = 2
samples/mo. = 1
samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 2.2
Variance = 1.7424
C.V. = 0.6
97th percentile daily values = 5.35351
97th percentile 4 day average = 3.66033
97th percentile 30 day average = 2.65331
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 0
Average Weekly limit = 0
Average Monthly Limit = 0

The data are:

2.2

11/23/2010 10:01:35 AM

Facility = Beacon Hill WTP
Chemical = Zinc
Chronic averaging period = 4
WLAa = 190
WLAc =
Q.L. = 5
samples/mo. = 1
samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 21
Variance = 158.76
C.V. = 0.6
97th percentile daily values = 51.1017
97th percentile 4 day average = 34.9395
97th percentile 30 day average = 25.3271
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 0
Average Weekly limit = 0
Average Monthly Limit = 0

The data are:

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated industrial wastewater into a water body in Loudoun County, Virginia.

PUBLIC COMMENT PERIOD: January 27, 2011 to 5:00 p.m. on February 25, 2011

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Wastewater issued by DEQ, under the authority of the State Water Control Board

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Loudoun Water, P.O. Box 4000, Ashburn, VA 20146; VA0090573

NAME AND ADDRESS OF FACILITY: The Beacon Hill WTP, 17132 Winning Colors Place, Leesburg, VA 20175

PROJECT DESCRIPTION: Loudoun Water has applied for a reissuance of a permit for the public Beacon Hill Water Treatment Plant. The applicant proposes to release treated industrial wastewaters at a maximum rate of 0.008 million gallons per day into a water body. The industrial sludge from the treatment process will be disposed of by transportation to the Blue Plains interceptor line location on the Loudoun County Parkway. The facility proposes to release the treated industrial wastewaters into an unnamed tributary of Limestone Branch in Loudoun County in the Potomac River/Limestone Branch watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, TSS, Chlorine, and Dissolved Oxygen.

DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the documents at the DEQ-Northern Regional Office by appointment, or may request electronic copies of the draft permit and fact sheet.

Name: Anna Westernnik

Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193

Phone: (703) 583-3837 E-mail: anna.westernnik@deq.virginia.gov Fax: (703) 583-3821

**State "Transmittal Checklist" to Assist in Targeting
Municipal and Industrial Individual NPDES Draft Permits for Review**

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name:	Beacon Hill WTP
NPDES Permit Number:	VA0090573
Permit Writer Name:	Anna Westernik
Date:	November 1, 2010

Major ☐Minor ☒Industrial ☒Municipal ☐**I.A. Draft Permit Package Submittal Includes:**

	Yes	No	N/A
1. Permit Application?	x		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	x		
3. Copy of Public Notice?	x		
4. Complete Fact Sheet?	x		
5. A Priority Pollutant Screening to determine parameters of concern?	x		
6. A Reasonable Potential analysis showing calculated WQBELs?	x		
7. Dissolved Oxygen calculations?		x	
8. Whole Effluent Toxicity Test summary and analysis?		x	
9. Permit Rating Sheet for new or modified industrial facilities?	x		

I.B. Permit/Facility Characteristics

	Yes	No	N/A
1. Is this a new, or currently unpermitted facility?		x	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	x		
3. Does the fact sheet or permit contain a description of the wastewater treatment process?	x		
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		x	
5. Has there been any change in streamflow characteristics since the last permit was developed?		x	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?		x	
7. Does the fact sheet or permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	x		
8. Does the facility discharge to a 303(d) listed water?*	x		
a. Has a TMDL been developed and approved by EPA for the impaired water?*	x		
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?*			x
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?*		x	
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		x	
10. Does the permit authorize discharges of storm water?		x	

*303(d) listed water is downstream—not the immediate receiving stream

I.B. Permit/Facility Characteristics – cont.	Yes	No	N/A
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		x	
12. Are there any production-based, technology-based effluent limits in the permit?	x		
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		x	
14. Are any WQBELs based on an interpretation of narrative criteria?		x	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		x	
16. Does the permit contain a compliance schedule for any limit or condition?		x	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?	x		
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	x		
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		x	
20. Have previous permit, application, and fact sheet been examined?	x		

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Review Checklist – For Non-Municipals (To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	x		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	x		

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	x		
2. Does the fact sheet discuss whether “antibacksliding” provisions were met for any limits that are less stringent than those in the previous NPDES permit?			x

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?		x	
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?			x
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?			x
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	x		
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?		x	
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a “reasonable measure of ACTUAL production” for the facility (not design)?			x
5. Does the permit contain “tiered” limits that reflect projected increases in production or flow?		x	
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			x
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?	x		
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?	x		
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		x	

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	x		
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?		x	
3. Does the fact sheet provide effluent characteristics for each outfall?	x		
4. Does the fact sheet document that a “reasonable potential” evaluation was performed?	x		
a. If yes, does the fact sheet indicate that the “reasonable potential” evaluation was performed in accordance with the State’s approved procedures?	x		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?	x		

II.D. Water Quality-Based Effluent Limits – cont.	Yes	No	N/A
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have “reasonable potential”?	x		
d. Does the fact sheet indicate that the “reasonable potential” and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?		x	
e. Does the permit contain numeric effluent limits for all pollutants for which “reasonable potential” was determined?	x		
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	x		
6. For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?	x		
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	x		
8. Does the fact sheet indicate that an “antidegradation” review was performed in accordance with the State’s approved antidegradation policy?	x		

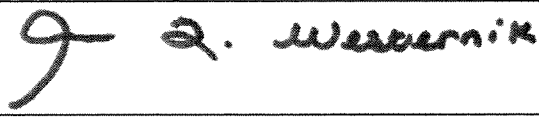
II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters?	x		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?		x	
3. Does the permit require testing for Whole Effluent Toxicity in accordance with the State’s standard practices?		x	

II.F. Special Conditions	Yes	No	N/A
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs?		x	
a. If yes, does the permit adequately incorporate and require compliance with the BMPs?			x
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			x
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?	x		

II.G. Standard Conditions		Yes	No	N/A
1. Does the permit contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?		x		
List of Standard Conditions – 40 CFR 122.41				
Duty to comply	Property rights	Reporting Requirements		
Duty to reapply	Duty to provide information	Planned change		
Need to halt or reduce activity	Inspections and entry	Anticipated noncompliance		
not a defense	Monitoring and records	Transfers		
Duty to mitigate	Signatory requirement	Monitoring reports		
Proper O & M	Bypass	Compliance schedules		
Permit actions	Upset	24-Hour reporting		
		Other non-compliance		
2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?		x		

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	<u>Anna T. Westernik</u>
Title	<u>Environmental Specialist II</u>
Signature	<u></u>
Date	<u>November 1, 2010</u>